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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,907	08/04/2003	Kuniaki Tanaka	240854US	2882
22850	7590	01/08/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			BEATTY, ROBERT B	
			ART UNIT	PAPER NUMBER

2852

DATE MAILED: 01/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/632,907	Applicant(s) TANAKA ET AL.	
	Examiner Robert Beatty	Art Unit 2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-55, 73-85, 95, 99 and 100 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36, 42-45, 73-85, 95, 99 and 100 is/are rejected.
- 7) ☒ Claim(s) 37-41 and 46-55 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/868,892.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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1. Figure 59 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

3. The abstract of the disclosure is objected to because it should include a more specific description of the invention which is now claimed. Correction is required. See MPEP § 608.01(b).

4. Claims 37-41,45,47-55 are objected to because of the following informalities:
in claim 37, line 3; claim 45, line 5; claim 47, line 4; claim 51, line 4; change "round" to --rotation--;
in claim 55, line 2, change "Which" to --which--;
Appropriate correction is required.

5. Claims 73-85,99-100 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 73, lines 2 and 3 from the bottom of the claim, the applicant recites "when the interruption" ... "is removed" however, applicant has not described an interruption occurring beforehand which renders the claim confusing. Similar indefiniteness occurs in claims 80,99 and 100 and their dependents.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 36,42-45 and 95 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP# 11-231599 (with machine translation).

JP#599 teach an image forming apparatus comprising a photoconductive drum 4, a laser/polygonal mirror exposure device 2, a developing device 3 having toners of yellow, magenta, cyan and black for developing electrostatic latent images, an intermediate transfer belt 1a for receiving superimposed developed color toner images, a transfer roller 5 in abutment with the intermediate transfer belt during a

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transfer of the final superimposed image from the intermediate belt to a recording sheet, a cleaning device 6 in abutment with the intermediate transfer belt (see Fig.6). The increase load that occurs to the intermediate belt due to contact with the transfer roller and cleaning roller will cause misregistration between the superimposed color toner images (see paragraph 12-14 of Japanese reference). This will particularly affect the last superimposed image (black image) for a color sheet (see paragraph 14) or the first image (yellow image) of the second sheet of a plurality of copied sheets (see paragraph 47-48). These misregistrations are denoted R_k and R_y . At an initialization of the apparatus, the a dummy image formation will be performed so that correct timings without loads imposed on the intermediate belt can be measured. A recognition means will recognize a difference in rotational period of the intermediate belt due to these loads during a cycle having the loads imposed. The difference will be determined (registration control amount) and either the exposure timing will be adjusted or the speed of the intermediate belt so that the misregistration R_k , R_y can be minimized (see paragraphs 20-25). The registration control amounts are stored in a working memory of a controller. On page 5 of the translation, paragraph 30, the value T_m (which is related to the correction amount R_k) is stored in a memory. In paragraph 51, it is explained that although the correction cycle can be done at the time of equipment activation (at the start of a working day when the printer is first turned on) it can be done before it is shipped. The correction value will be stored in a memory.

Specifically, JP# 11-231599 teach everything claimed except correcting the registration control amount after the color image is formed at least once. However, JP# 11-231599 teach performing the registration correction process when the copier is powered up. It would have been obvious to one of ordinary skill in the art at the time the invention was made that a copier, in a normal printing life, would be periodically turned off and therefore every time it is turned back on the transfer correction cycle would initiate which would "correct" the previously set values.

7. Claims 37-41,46-55 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

8. Claims 73-85,99 and 100 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tanaka et al. is the patented parent case.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Beatty whose telephone number is 703-308-1372. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley, can be reached on (703) 308-1373. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

A handwritten signature in black ink, appearing to read 'Robert Beatty', is positioned above the printed name and title.

Robert Beatty
Primary Examiner
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December 28, 2003